PREFACE

Genetic programming extends the genetic algorithm to the domain of computer programs. In genetic programming, populations of programs are selectively bred to solve problems. Genetic programming can solve problems of system identification, classification, control, robotics, optimization, game-playing, and pattern recognition.

Starting with a primordial ooze of hundreds or thousands of randomly created programs composed of functions and terminals appropriate to the problem, the population is progressively evolved over a series of generations by applying the operations of Darwinian selection and crossover (sexual recombination).

The 1995 AAAI Fall Symposium on Genetic Programming is the first isolated workshop devoted to this rapidly growing field. The 19 papers in these working notes are a sample of the wide range of research currently being conducted, including extensions to the evolutionary technique, and applications to a large number of real-world domains.

The symposium's three day format will facilitate a large amount of open discussion, interspersed with short presentations. Discussion topics will include protocols for evaluating applications of genetic programming, various extensions to the evolutionary method, and establishing standard benchmark problems. Presentations will include the papers in these working notes, as well as several additional presentations.

This symposium was made possible with the help of many people. Astro Teller, a member of the program committee, was particularly helpful in establishing and conducting the review process for the submitted papers. The members of the program committee, listed on the following page, reviewed paper submissions, providing valuable feedback to the authors. Finally, the people at AAAI have made the planning of this symposium simple and smooth.

We look forward to a productive and stimulating symposium.

Eric V. Siegel and John R. Koza, Symposium Co-Chairs